

~~METHODS FOR PRODUCING ENANTIOMERICALLY PURE α -
SUBSTITUTED CARBOXYLIC ACIDS~~

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In accordance with the present invention there are provided methods for producing enantiomerically pure α -substituted carboxylic acids, such as, for example, α -amino acids and α -hydroxy acids, said method comprising combining an aldehyde or ketone with a cyanide and ammonia or an ammonium salt or an amine, in the presence of a nitrilase or a polypeptide having nitrilase activity which stereoselectively hydrolyzes the amino nitrile or cyanohydrin intermediate under conditions sufficient to produce the carboxylic acid.

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Table 1. Demographic characteristics of the study population	
Age (years)	65.0 ± 1.5
Gender	
Male	50.0%
Female	50.0%
Education (years)	12.0 ± 1.0
Marital status	
Married	60.0%
Single	40.0%
Occupation	
Retired	70.0%
Unemployed	30.0%
Income (USD/month)	1,200.0 ± 200.0
Health status	
Good	60.0%
Poor	40.0%
Smoking status	
Smoker	20.0%
Non-smoker	80.0%
Alcohol consumption	
Drinker	10.0%
Non-drinker	90.0%
Comorbidities	
Hypertension	30.0%
Diabetes	15.0%
Cholesterol	25.0%
Arthritis	20.0%
Depression	10.0%
Medication use	
Yes	40.0%
No	60.0%